



OREGON STATE UNIVERSITY

104 Ocean Admin Building · Corvallis, Oregon 97331-5503
Telephone 541-737-3504 Fax 541-737-2064

November 12, 1997

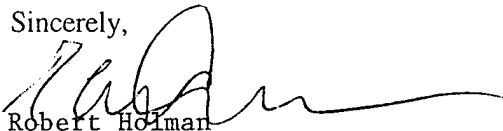
Dr. Tom Kinder
Office of Naval Research, Code 321CD
800 North Quincy Street BCT #1
Arlington VA 22217-5660

ONR Grant #N00014-95-1-1061
OSU #N0005A

Dear Dr. Kinder:

In order to complete my ONR grant entitled "Nearshore Oceanographic Instrumentation" I am sending three copies of the *Final Technical Report* to you with copies distributed as indicated below, along with a completed *Report Documentation Page (SF 298)*.

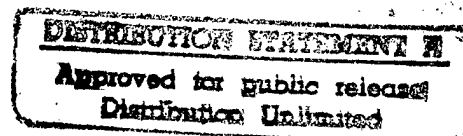
Sincerely,


Robert Holman

Defense Technical Information Center (2 copies)
8725 John J Kingman Rd, Suite 0944
Ft Belvoir VA 22060-6218

Administrative Contracting Officer (1 copy)
Office of Naval Research
Seattle Regional Office
1107 NE 45th Street, Suite 350
Seattle WA 98105-4631

Director, Naval Research Laboratory (1 copy)
Attn: Code 2627
Washington DC 20375



THIS MATERIAL IS UNCLASSIFIED

19971117 079

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE Nov. 12, 1997	3. REPORT TYPE AND DATES COVERED Final report (6/7/95 - 6/6/96)	
4. TITLE AND SUBTITLE Nearshore Oceanographic Instrumentation			5. FUNDING NUMBERS N00014-95-1-1061	
6. AUTHOR(S) Robert Holman				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) College of Oceanic and Atmospheric Sciences Oregon State University 104 Ocean Admin. Bldg. Corvallis, OR 97331-5503			8. PERFORMING ORGANIZATION REPORT NUMBER N0005A	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Office of Naval Research 800 North Quincy Street BCT #1 Arlington, VA 22217-5660			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) <p>Understanding of the small scale dynamics of wave-driven boundary layers and their associated sediment transport requires special types of instruments capable of measuring high frequency time series of suspended load concentration, fluid velocity and the time-varying location of the sediment bed. This grant allowed the purchase of five Fiber Optic Backscatter Sensor arrays, five Vertical Electromagnetic Current Meter arrays and five pressure sensors, thus enabling collection of the needed measurements over an array of horizontal locations to test hypotheses of the role of small scale processes in the large scale response of nearshore morphology.</p> <p>These instruments were deployed during the large Sandy Duck field experiment, 10 Sept - 30 Oct, 1997. PIs involved in this ONR-sponsored work were Rob Holman (Oregon State University), Richard Sternberg and Andrea Ogston (University of Washington), Daniel Conley (State University of NY, Stonybrook) and Reg Beach (Office of Naval Research, RPO through Oregon State University). As the instruments just came out of the water in the last week, no publications have yet resulted.</p>				
14. SUBJECT TERMS			15. NUMBER OF PAGES	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT	

GENERAL INSTRUCTIONS FOR COMPLETING SF 298

The Report Documentation Page (RDP) is used in announcing and cataloging reports. It is important that this information be consistent with the rest of the report, particularly the cover and title page. Instructions for filling in each block of the form follow. It is important to *stay within the lines* to meet *optical scanning requirements*.

Block 1. Agency Use Only (Leave blank).

Block 2. Report Date. Full publication date including day, month, and year, if available (e.g. 1 Jan 88). Must cite at least the year.

Block 3. Type of Report and Dates Covered. State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g. 10 Jun 87 - 30 Jun 88).

Block 4. Title and Subtitle. A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

Block 5. Funding Numbers. To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C - Contract	PR - Project
G - Grant	TA - Task
PE - Program Element	WU - Work Unit Accession No.

Block 6. Author(s). Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

Block 7. Performing Organization Name(s) and Address(es). Self-explanatory.

Block 8. Performing Organization Report Number. Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es). Self-explanatory.

Block 10. Sponsoring/Monitoring Agency Report Number. (If known)

Block 11. Supplementary Notes. Enter information not included elsewhere such as: Prepared in cooperation with...; Trans. of...; To be published in.... When a report is revised, include a statement whether the new report supersedes or supplements the older report.

Block 12a. Distribution/Availability Statement. Denotes public availability or limitations. Cite any availability to the public. Enter additional limitations or special markings in all capitals (e.g. NOFORN, REL, ITAR).

DOD - See DoDD 5230.24, "Distribution Statements on Technical Documents."

DOE - See authorities.

NASA - See Handbook NHB 2200.2.

NTIS - Leave blank.

Block 12b. Distribution Code.

DOD - Leave blank.

DOE - Enter DOE distribution categories from the Standard Distribution for Unclassified Scientific and Technical Reports.

NASA - Leave blank.

NTIS - Leave blank.

Block 13. Abstract. Include a brief (*Maximum 200 words*) factual summary of the most significant information contained in the report.

Block 14. Subject Terms. Keywords or phrases identifying major subjects in the report.

Block 15. Number of Pages. Enter the total number of pages.

Block 16. Price Code. Enter appropriate price code (*NTIS only*).

Blocks 17. - 19. Security Classifications. Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

Block 20. Limitation of Abstract. This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.

FINAL TECHNICAL REPORT

ONR GRANT #N00014-95-1-1061

Dr. Robert Holman
Nearshore Oceanographic Instrumentation

This instrumentation grant supported the purchase of equipment for use in studies of nearshore oceanographic processes. Equipment purchased included five Fiber Optic Backscatter Sensor arrays, five Vertical Electromagnetic Current Meter arrays, and five pressure sensors.

The instrumentation was purchased in order to investigate suspended sediment concentration, bed level fluctuations, horizontal fluid velocities and sea surface fluctuations in the nearshore region. After arrival of this instrumentation in Spring, 1996, the instrumentation was calibrated using facilities located at Oregon State University.

In conjunction with existing sensor inventories, this new equipment is presently being used in SandyDuck, a large multi-investigator nearshore experiment being conducted at Duck, NC from September 10 to November 1, 1997. Several PI's are involved in this ONR-sponsored field work. They are: Dr. Robert Holman (Oregon State University), Dr. Richard Sternberg and Dr. Andrea Ogston (University of Washington), Dr. Daniel Conley (State University of NY, Stonybrook), and Dr. Reginald Beach (Office of Naval Research, ROPO through Oregon State University).

Several aspects of nearshore fluid and sediment dynamics are being investigated using this equipment: (1) the vertical and horizontal structure of spectral partitioning of cross-shore and longshore transport; (2) the elevation and frequency bands of importance for various scales of morphology modification; (3) evaluation of the role of breaking waves on the vertical distribution of suspended sediment; (4) the cross-shore distribution of total suspended load and its relation to the beach profile; (5) examination of longshore coherence scales and the influence of large scale flows on nearshore morphology change and; (6) the correlation of sediment flux divergence to changes in beach bathymetry.

LIST OF PUBLICATIONS

Since the field experiment has just ended in the last week, there are yet to be publications from this grant.